Defining an Emergency - A Prospective Study of Patient / Physician Agreement on the Prudent Layperson Standard & Discussion of the Politics, Stakeholders, Conflicts & Legislation Affecting the Definition of an Emergency

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Introduction

"Defining an emergency" serves many purposes. It has also been used to define an "appropriate" visit to the emergency department. It is, to some, defining which claims are appropriate to deny payment for. For others, it's when are we morally obligated, or legally bound to treat someone? Defining an emergency is important to the patient wondering when to come to the emergency department and when to wait and go somewhere else. Patients may wonder if they are contributing to the "overcrowding" of emergency departments or are they a "valid" emergency patient. For the doctor, they might wonder if they are contributing to the rising costs of medical care or are they just fulfilling their duty to address the varied needs of their patients.

The problem that this paper addresses is: how do we define an emergency? Divergent opinions about how to define an emergency have been, and continue to be, a point of conflict for various stakeholders. **{See Appendix 2- Stakeholders}** This paper will explore the difficulties, importance of, and politics of defining an emergency. The definition of an emergency is politically charged, relatively subjective, and often emotionally driven thing; the definition of an emergency is the subject of many federal and state laws, regulations, policies and papers. Inclusive papers exploring how we define an emergency have been published in the past, but now, six years post Balanced Budget Act, and in a new political climate, it is time to review where we are. There are three objectives for this paper. The first is to describe the political background and previous work on defining an emergency. Next, I will present the results of a study to describe the agreement of emergency department patients and physicians on the definition of an emergency visit, using the prudent layperson standard. Finally, I will discuss

the current situation of reimbursement for emergency department visits and the enforcement of existing legislation of emergency department visit reimbursement. I will describe some possible future policy options for enforcing a fair definition of an emergency visit.

In much of this paper I will refer to the "prudent layperson standard." This refers to a standard of defining an emergency based on what a "prudent layperson" would consider an emergency. Federal law mandates access to care for any "prudent layperson" emergency. **(See Section I: Legislative Definitions)** There is a federal law affecting Medicare and Medicaid insurance plans mandates coverage for "prudent layperson"-defined emergencies. **(See Section I: Legislative Definitions)** In this paper, reference to the "prudent layperson" standard should be understood to be the definition used in the federal laws.

I: Politics of defining an emergency

Why is it important to define an emergency medical condition?

Defining an emergency medical condition is important to each stakeholder for different reasons. One of the more common ways that this definition has been approached is to attempt to categorize emergency department visits as "appropriate" or "inappropriate" to be seen in the emergency department. The goal of deciphering "appropriate" from "not appropriate" is to then make an argument to discourage the inappropriate visits to the emergency department.[1,2,3,4,5] In the context of increased concern about emergency department overcrowding, it might seem logical to divert the "inappropriate" visits to another place.[6] Also, if it is less expensive to treat the "inappropriate" visits somewhere else, it may be cost effective to channel them there. Finally, it may be that the patients that come to the emergency department for nonemergencies would be better served in a primary care clinic that can offer better continuity of care.

Defining what is considered an emergency is important to policy-makers. In the dawn of the managed care revolution many cost-saving experiments were implemented. One of the targets was reducing emergency department utilization.

Some of the gatekeeping tactics introduced by managed care organizations during this period were thought to be unsafe by policy-makers. In addition, ambulance diversions and unsafe transfers were getting attention. Policies to prevent unsafe emergency department restrictions were born. Laws regulating emergency care access have been debated ever since. In addition to access to care, an issue important to doctors, hospitals and patients, is reimbursement for the emergency care. If insurers, providers, patients and the law define an emergency in different ways then the providers may be left with unpaid visits or the patients with bills they can not pay.

Many of the arguments for defining "inappropriate" emergency department visits hinge on the assumption that the health care system would be more effective by shifting nonurgent patient care away from the emergency department. This assumption is only true if, 1) it is even possible to know which visits are the "inappropriate" visits, 2) it really costs more to see these patients in the emergency department, 3) without these patients, emergency department outcomes would be improved, and 4) they have somewhere else that will meet their needs.

There is certainly a widespread perception that emergency care is expensive care.[7,8,10] However, in the United States, the marginal cost of emergency department care for minor problems is similar to the cost of care elsewhere, and the total cost for emergency department care in this country is only 3% of the US health care budget. [9,10] Costs are different for each stakeholder. While the cost to the third-party payer may be higher for emergency department care, the costs to the hospital may be less. In general, the fixed costs of operating an emergency department (supplies, equipment, and basic staffing needs) are high, while the marginal costs (the costs to treat each additional patient) are relatively low.[11,19] The average cost would therefore decrease as the volume of patients increases. Revenues generated from treating nonurgent problems may help to subsidize the high fixed costs of keeping an emergency department open and prepared to handle true emergencies.[7] It may be in the financial interests of

the hospital, and therefore "appropriate" from its point of view, to treat patients with nonurgent problems in the emergency department[11]

Although there is evidence that patients with better continuity of care have lower emergency department use rates,[12] there is no evidence that patients who use the emergency department for minor problems have worse outcomes than patients who obtain care for the same problems in traditional primary care settings.[12] Also, if patients use the emergency department due to lack of a stable relationship with a primary care provider elsewhere, then referring them back to a primary care site that lacks continuity of care might not improve their outcomes.[9,12] While emergency departments may lack the continuity of a primary care provider, they are frequently more accessible.[11] For some types of nonurgent care, accessibility may be more important than continuity for improving health outcomes.[11]

Emergency department overcrowding has multiple causes, including limited inpatient bed availability and problems with other resources, which may not respond to reducing the number of emergency department patients who can be seen and discharged home.[13,14,15,16,17,18] An aspect of "overcrowding" that should be acknowledged is "boarding" acutely ill patients in an emergency department, because no inpatient beds are available in the hospital.[19] A recent study of emergency department capacity in California found the number of critically ill patients had increased by 59 percent during a 10-year period; at the same time there was an 8-percent decline in nonurgent visits to emergency departments.[19] Evidence is not available to show that the presence of "non-urgent" or minor cases increases risk of bad outcomes in the emergency department.

Some emergency physicians have argued that the question of "what is an emergency?" is not a question they care about- instead it is a question that others want to define.[20] In an editorial titled "What is an emergency, and who wants to know?" John McCabe argues that the public knows what an emergency is- they come in when they have an acute need. He continues with "this acute need may span a spectrum from need for the replacement of a lost prescription to the patient with serious illness". McCabe says that emergency medicine is a specialty created

for this varied spectrum of patients' needs. It is his opinion that health care payers have taken a keen interest is defining an emergency with the true intent of defining a group to which they can justify denying payment, not the more noble interest in the patients' continuity of care.[20]

Why is it hard to define an emergency?

Defining an emergency visit seems to be hard to agree on. The difficulty may be a result of many stakeholders, all with different needs and utilities. **{See Appendix 2- Stakeholders}** The difference in definitions may also come from a fundamental difference in levels of acceptable risk. In addition, differences in ideology, born from different training, may account for some of the differences seen between medical specialties. And finally, difference in perspective and available information may contribute to the confusion.

How to define an emergency

There is a good deal of literature focused on defining an emergency. Studies of emergency department use report anywhere from 11% to 82% of emergency department visits a non-emergency.[21,22,23,24,25,26,44,46,47,36,48,50] Although some of this variation probably represents real differences among study populations, it is likely that much of the variation is due to different methods of classifying visits. The literature includes studies that try to categorize emergency department visits as "appropriate" and "inappropriate," studies that see how patients define an emergency medical condition (at the emergency department, the supermarket and more), studies that look at how insurers define an emergency visit, and studies that compare different healthcare workers' definitions. With few exceptions, the studies are retrospective and most use an arbitrary "gold standard."

While reviewing the available literature it is especially important to consider the strength of the method utilized in defining an emergency. An editorial by Lowe and Abbuhl discussed the "appropriate standards for appropriateness research and proposed questions for evaluating articles on

appropriateness of emergency department use.[9] One of their questions focused on examining the "gold standard" or criterion standard that the study used to measure the appropriateness of the emergency visit.[9] They wrote that so far, no uniform criterion standard exists for the appropriateness of emergency department visits. The available studies show poor correlation between any two measures of appropriateness and wide variability in the proportion of emergency department visits deemed appropriate by different measures.[44,45] They concluded that without an agreed upon "gold standard" it is incumbent on researchers to demonstrate the reliability and validity of their measures of appropriateness.[9]

It does seem that if the outcome for studies that try to define emergency department visits is agreement, then these measures do not work well. The published kappas for agreement when defining emergency department visits in this manner are poor.[20-25,45] Again, these results may not be surprising. Varying perspectives of the people doing the defining could make agreement difficult. Despite the questionable validity of these studies, I will outline some of the findings from previous work on defining an emergency. I will discuss each stakeholder and the general position that each group takes on using the prudent layperson standard to define emergencies.

Insurers

Determining how insurers define an emergency visit depends on where one looks for their definition. Insurers may have a policy that includes accepting the prudent layperson standard (PLS) (which may be necessary by law depending on the insurer- **See Section I: Legislative Definitions**) definition of emergencies, and give instructions to their members inconsistent with the PLS.[27,28,29,60] In addition, some insurers may encourage their members to go to the emergency department for patient-defined emergencies, and later deny the member's claim- thereby revealing a retrospective definition of an emergency.[53] In regards to insurers' definition of an emergency, the incongruity between the official policies of insurers and the definition reflected in their reimbursement practices is

significant. The situation of reimbursement is a central issue, and I will address it further in the third portion of this paper.

Insurance companies certainly have fiduciary incentives to deny claims, but insurers claim that their bottom line is that they want to decide which cases are "really" emergencies and which are not.[30] Insurers report that current billing systems are not set up to examine claims based in an admission complaint verses a discharge diagnosis.[30,31] They want to have their members with non-emergencies treated in a "more appropriate," less costly setting.[30,31] They argue that a system can be constructed that triages non-urgent patients away from the emergency department or picks them out retrospectively to deny their claims then the system could be made more efficient (i.e., maybe patients will get better (more continuity, etc) or cheaper care- also reducing emergency department overcrowding and possibly make it safer for the "true" emergencies).[30,31] Insurers' position is that they do not miss a great deal of legitimate claims and that a denied claim can always be appealed.[30,31]

Emergency Physicians

Most studies that have emergency physicians categorize emergency department visits are using the physician's definition as the "gold standard." Some studies have examined how well emergency physicians define emergencies by retrospectively comparing the doctors' initial perception of the urgency of the case to the ultimate patient disposition.[33-35]

Current literature finds that emergency physicians have reported from 5 to 20 % of patients with "minor-sounding" symptoms proved to have truly emergent medical problems warranting emergency department evaluation and care.[32, 33, 34, 35]

A study of 300 emergency department visits related an emergency physician symptom severity assessment to the case management and disposition. The treating emergency physician classified patients' symptoms at presentation and after work-up was complete. About 10% (95% exact CI: 4% to 18%) of

patients whose symptoms were classified as "minor or nonemergent" actually did require emergent care. The authors concluded that even prospective emergency department visit severity assessment by EPs does not reliably identify "unnecessary" emergency department visits.[36]

These studies can not reveal how emergency doctors define an emergency; rather, it tells us how well they guess the ultimate outcome of the case. A patient could not be admitted without the emergency physician thinking that the case was urgent at some point in the visit. The difficulty in predicting the outcome of a case prior to work-up or from a retrospective chart review is illustrated in the many studies that reveal that even emergency physicians can not always define an emergency.[32,33,34,35,36]

Emergency medicine physicians, who are required under the Emergency Medical Treatment and Labor Act (EMTALA) to provide stabilizing care to all patients, are the most directly affected physicians by noncompliance with prudent layperson laws. Emergency departments report that they lose a great deal of money in legitimate prudent layperson claims. The financial loss is also an opportunity loss; this is money that might go to the maintenance of the physical plant, nurse / physician continuing education, hiring more ancillary staff, etc. In addition to financial reasons, physicians are also concerned that the risk of lack of reimbursement for emergency department visit claims will make patients reluctant to seek necessary care in the emergency department. All of the major groups representing emergency physicians (American College of Emergency Physicians, Society of Academic Emergency Medicine and American Board of Emergency Medicine) have position statements that support a uniform, federally protected right to emergency care access using a prudent layperson definition.[39]

Other Providers

Anecdotally, there is perceived to be a difference in opinion between emergency physicians and other providers about what visits are emergencies. A study by Foldes, et al compared an emergency physician's and an internist's

designations of "emergency visits" by retrospective chart review.[33] They found significant divergence regarding the designation of visits as "emergencies" and the appropriate treatment location.[33] Further analysis revealed no correlation between patients' perceptions and either physician's judgments concerning what constitutes an "emergency," suggesting that neither specialty's assumptions are sensitive to patients' experience.[33]

Foldes discussed the "turf" and ideological differences between two medical specialties.[33] Despite these real or imagined differences, other non-emergency medicine physicians support a prudent layperson standard.[37] Emergency medicine physicians are not the only physicians that are affected by lack of reimbursement in the emergency room.[38] Other physicians are called to the emergency department to help assess and stabilize patients. These other physicians are also vested in receiving reimbursement for legitimate claims.[33,37,38] In addition, non-emergency medicine physicians are concerned that without a well enforced prudent layperson standard access to emergency care will be threatened and possibly be unsafe for patients.[37] These organizations impact policy by joining with the American College of Emergency Physicians and other emergency medicine organizations, individual political action committees, personal contacts, group letters to representatives, and alerts to members about possible policy activities.[39]

Patients

Two studies have tried to directly reveal how laypeople define an emergency. A study published in 1999 reported results of a survey of the general public ("real laypeople") about what conditions they thought were medical emergencies. They conducted a survey of a large population of non-medical individuals at supermarkets and malls and compared the findings with views held by healthcare workers (including MD, RN, LPN and PA).[25] Of the 30 chief complaints in the survey, agreement was seen between the public and health care workers for severe abdominal pain (94% vs. 99%, respectively) and severe chest

pain (96% vs. 99%, respectively). However, the two disagreed on the need for emergency department care for severe headache (58% vs. 91%, respectively); mild chest pain (51% vs. 79%, respectively); and difficulty breathing (77% vs. 98%, respectively). No significant difference in opinions on the need for emergency department care was seen for some minor conditions: mild headache, sore throat, cough, flu symptoms, and minor foot problems (all of their results were controlled for age, occupation and an income proxy).[25]

A second study designed to examine how "prudent laypersons" define emergencies used a survey based on federal and state prudent layperson language.[40] This study used a survey of nonmedical "self-proclaimed laypersons." The authors reported that a minority of symptoms and signs (25/87, 29%) were considered emergency medical conditions by more than half of the nonmedical laypersons. The leading conditions deemed emergencies were loss of consciousness, seizure, no recognition of one side of the body, and choking. Pain, except for renal colic or chest pain, was not considered an emergency. No symptoms or signs specifically related to gynecologic disorders were considered emergencies.[40] An interesting thing to note is that in this study, the self-designated laypersons actually did not consider most symptoms and signs tabulated in the diagnostic coding manual, ICD-9, an emergency medical condition.

Both studies concluded that "prudent laypersons" underestimate when defining an emergency medical condition. It is possible though, since many of the conditions deemed non-emergencies in these studies are conditions commonly investigated and treated in the emergency department that the study population acts differently in the supermarket than in the emergency department. It is quite different to deem an artificial patients' pain a non-emergency than to have the pain oneself.

Again, despite these study results, politically "laypersons" support prudent layperson legislation. Organizations that represent persons relying on emergency care are interested in protections of access and reimbursement for emergency visits (represented by patient advocacy groups, AFLCIO, AARP, National Council of Senior Citizens, access coalitions, etc.). Numerous opinion polls have

shown that they have concerns that denial of claims for emergency visits will be a deterrent to patients that need emergency care.[39] Patient organizations lobby for federally protected patient rights laws including a prudent laypersons definition of emergency care.[41] Patient organizations influence policy by lobbying, sending alerts and opinions to members, support of litigation, personal contacts, donations, and voting.

Legislative Definitions

A 1986 federal law, the Emergency Medicine Transfer and Labor Act (EMTALA), defines an emergency medical condition as "a medical condition manifesting itself by acute symptoms of sufficient severity (including severe pain, psychiatric disturbances, or symptoms of substance abuse) such that the absence of immediate medical attention could reasonably be expected to result in: A) placing the health of the individual (or, with respect to a pregnant woman, the health of her unborn child) in serious jeopardy; B) serious impairment to bodily functions; or C) serious dysfunction of any bodily organ or part."[67] After EMTALA, the federal government included the "layperson" definition of an emergency in the 1996 Balanced Budget Act when it addressed emergency access for Medicare and Medicaid recipients. By federal law, Medicare and Medicaid insurers are to use a prudent layperson standard definition of an emergency. Many states have adopted prudent layperson laws that regulate non-Medicare/Medicaid insurers, with an exception. The exception is the more than 50 million persons in Employee Retirement Income Security Act (ERISA) self-insured plans. ERISA health plans are not subject to state laws and must be regulated by the federal government.[67]

II. A Prospective Study of Patient / Physician Agreement on the Prudent Layperson Standard

Study Introduction

This study, conducted in the UNC Emergency Department in the summer of 2001, follows through with some of the previous work done in the department on visits meeting the Prudent Layperson Standard. In one study, conducted in 2000, 92% of UNC Emergency Department patients considered themselves to meet the Prudent Layperson Standard. Whether physicians or insurance companies concurred with patients in their assessment of medical need was unknown.[42]

In another UNC Emergency Department study, two hundred emergency department visits and claims were retrospectively reviewed from the month of September in1998.[43] In the retrospective study, a sample of emergency department payment denials was reviewed to determine medical necessity for each visit using an arbitrary Prudent Layperson standard. The study found that for the two insurers that they examined, 62 to 86% of UNC emergency department visits for which payment was denied as "not a medical emergency" might have met the Prudent Layperson definition of an emergency.[43]

This study has two parts. The first objective of the study was to assess the agreement between patients seen in the emergency department and their treating emergency physicians on whether the patients' visits met the prudent layperson definition of an emergency. The second objective of the study was to retrospectively review the patients' information to determine the reimbursement for their emergency department claims. Obtaining the information for the review of reimbursements proved to be nearly impossible, and the work is still in progress. Therefore I will present only the first part of this study and instead include further discussion of the issue of reimbursement for emergency department visits in Section III of this paper.

Methods and Materials

This study was conducted in the emergency department of a large university teaching hospital. A prospective, convenience sample of 401 consecutive emergency department patients was approached to consent to be in the study. Patients were approached after the physician had done the primary evaluation, while they were waiting for laboratory, radiologic or other study results. Sampling was performed during all three shifts and for approximately four weeks in the summer of 2001. Eligible patients were those age 18 and older. Patients were excluded if determined by the research assistant to be mentally impaired, or medically unstable. Prisoners and non-English speakers were excluded as well.

After initial evaluation by a physician, consenting patients were asked to complete a six-question survey. Research assistants collected demographic data (including age, gender, ethnicity, triage level, and insurance status). The first four questions on the patient's survey were worded to match the federal definition of an emergency using the prudent layperson standard. For each question, the patients were asked to circle the answer ("yes" or "no") that best described their frame of mind when they decided to come to the hospital. The first four questions were: 1) I was having *severe pain* or other *severe symptoms*, 2) I believed that without immediate medical attention, *my health (or if pregnant, the health of my unborn child) would be placed in serious danger*, 3) I believed that without immediate medical attention I would have *serious problems with my bodily functions* (for example, not being able to eat, drink, or breathe properly), 4) I believed that without immediate medical attention I would have *serious problems in a bodily organ or part* (for example, pneumonia or a heart attack). The last two questions were 5) I was told to come to the hospital by a doctor, nurse, or other health professional, and 6) I came here today because I don't have a doctor, and/or couldn't get a doctor's appointment, and/or didn't know where else to go for help.

After the treating physician finished the initial examination of the patient, he/she was asked to complete a four-question survey. The four questions mirrored the first four questions in the patient survey (with "yes" or "no" answer options):1) The patient was having *severe pain* or other *severe symptoms*, 2) Without immediate medical attention, the patient's *health (or if pregnant, the health of the unborn child) would be placed in serious danger*, 3) Without immediate medical attention the patient would have *serious problems with bodily functions* (for example, not being able to eat, drink, or breathe properly), 4) Without immediate medical attention the patient would have *serious problems in a bodily organ or part* (for example, pneumonia or a heart attack).

Patient demographic data were analyzed using simple univariate analysis. Categorical variables were analyzed for frequencies and continuous data (age) for central tendency, variation and distribution. The primary outcome, patient and physician answers to the survey questions, was treated as a dichotomous variable with any "yes" as a positive answer. The x-variables (age, ethnicity, triage and insurance) were dichotomized based on an initial review of the data (age≥40/<40; triage 2-3/4-5 (5-teir triage system 1-5 (most to least urgent), and level 1 patients were not in study); white/non-white; all insured/uninsured) for bivariate analysis yielding unadjusted risk ratios and 95% confidence intervals and proportions with *p* values (Pearson's Chi-square for normal data; Spearman's rank correlation for ordinal data, i.e. triage). Multivariate analysis for a "dichotomous y" was done with a logistic regression model and discriminant analysis to present adjusted odds ratios (95% confidence intervals) and adjusted proportions (*p* values). A separate logistic regression model was run for the patients' survey answers and the physician survey answers (each with the patient's demographic data as x-variables and the dichotomized survey answers as the y-variable). Patient and provider agreement was analyzed using a calculation for kappa and tests for variance of kappa.

Results

A total of 401 patients were approached to be in the study. Of these, 361 agreed to participate: 148 men (41%) and 213 women (59%). The mean age in the study was 47.4 years; 68.4% were Caucasian, 28.3% African-American and 3.3% Latino/Latina, Asian-American, or American Indian/Pacific Islander. The most frequent nurse triage level in the study was Level 3 (levels1-5, most urgent to least urgent) (57%), Level 5 had the fewest participants (2.2%). The most frequent insurance group was Medicare or Medicaid (37.4%), followed by managed care organization (MCO) (29.4%), uninsured (21.9%), other commercial non-MCO insurer (7.8%), worker's compensation (2.2%) and unknown/other (1.4%). {**See Appendix 1: Table 1a**}

The study sample was statistically significantly different from those who did not consent in two variables, mean age and ethnicity. The non-consenters were older (mean age 56.3 vs. 47.3); there were more African-American non-consenters than consenters (47.5% vs. 28.3%) and fewer Caucasian non-consenters than consenters (50% vs. 68.4%). {**See Appendix 1: Table 1b**}

Bivariate analyses of the variables as indicators of the treating physician thinking the patient met the prudent layperson standard or patient meeting the prudent layperson standard was performed.{**See Appendix 1: Table 2**} If the treating physician or patient answered "yes" to any of the first four survey questions, the visit was considered to have met the standard. The treating physicians indicated that 246 (68.1%) of the patients met the prudent layperson standard and 332 (91.9%) of the patients reported that they met the standard. The treating physician and the patient agreed 235 times (65.1%). The overall physician / patient agreement was fair-moderate with a kappa of 0.40 ($p<0.00001$).

The physician was most likely to say that the patient met prudent layperson standard when the patient was in the age groups under 20 years (80%) and between 70 and 79 years (90.9% $p<0.005$). In addition, the treating physician was more likely to say that the patient met PLS in the older group when patient age was used as a dichotomous variable (75.1% of the group $\geq$40 vs. 57.1% of the

group <40; p<0.001). Patients were more likely to met PLS if they were in the older group (95.5% of the group ≥40 vs. 86.4% of the group <40; p<0.002). Yet, using age as a dichotomous variable, the kappa was better in the younger group (kappa 0.15 vs. 0.08). Considering the age groups, the only one with "substantial" agreement was the group under 20 years (kappa = 0.62 (p<0.02), *substantial defined as kappa 0.61-0.80*). **{See Appendix 1: Table 2}**

As expected, physicians were more likely to say that the patient met prudent layperson standard as the nurse-classified triage level increased in urgency (p<0.001). The patients were also more likely to meet prudent layperson standard as the nurse-classified triage increased in severity (p<0.0003). The agreement was better at the highest and lowest triage levels. **{See Appendix 1: Table 2 and Figure 1}**

Participant characteristics of ethnicity, sex and insurance status were not statistically significant in regard to the main outcome variables (patient survey answers (1-4), physician survey answers or patient / physician agreement). The insurance status characteristic predicting the outcome variable patient survey answers (1-6) was statistically significant in the bivariate analysis, but was revealed to be non-significant in further models. The "other" category, including Latino/Latina, Asian-American, or American Indian/Pacific Islander, had a patient / physician agreement of 83.3% vs. 66% and 60.8% for "white" and "black" groups respectively. This difference was not statistically significant (p=0.26). **{See Appendix 1: Table 2}**

Using multivariate analysis (logistic regression model), the variables age and triage were the only significant indicators of a positive answer on the patient or physician surveys. The adjusted odds ratio was 1.81 (physician survey) and 2.80 (patient survey) for age (in other words, for the physician survey, the odds that patients that met PLS were in the group ≥40 was 1.81 compared to the group <40, adjusted for other variables and for the patient survey, the odds that patients that met PLS were in the group ≥40 was 2.80 compared to the group <40, adjusted for other variables). **{See Appendix 1: Table 3 and Figure 1}**

Also from the logistic regression model, triage level ≤3/≥4 had an adjusted odds ratio of 4.64 (95% CI 2.70-7.96) for the physician survey and 3.21 (95% CI 1.44-7.13) for the patient survey (in other words, for the physician survey, the odds that patients that met PLS were triage level 2 or 3 was 4.64 compared to triage level 4 or 5, adjusted for other variables and for the patient survey, the odds that patients that met PLS were triage level 2 or 3 was 3.21 compared to triage level 4 or 5, adjusted for other variables). **{See Appendix 1: Table 3 or 4 and Figure 1}**

Discussion

The results of this study are consistent with the findings of other studies that compare the agreement of different methods of classifying emergency department visits.[34,44,45] Overall agreement between physicians and patients was either slight, or at least difficult to measure beyond chance. When using kappa values to measure agreement, the agreement expected by chance alone is subtracted. For instance, in our study, for questions 1-4 the agreement found was 70.08%, but the agreement expected by chance is 65.23%, resulting in a kappa of only 0.40 ("fair"). A study done by Lowe prior to 1997 Balanced Budget Act examined seven different indicators of "inappropriate" emergency department visits and reported all 21 possible pairs of indicators for agreement. They found kappa values ranging from -0.04(poor) to 0.31(fair), indicating in some instances, poor agreement beyond that expected from chance alone.[44] The study reported a patient / physician agreement kappa of -0.01 (poor). The overall patient / physician agreement in our study was kappa of 0.14 (slight). Neither study shows an impressive agreement. The difference in the kappa results may be due to a more subjective patient definition of emergency used in the Lowe study (a five point scale from "extremely serious" to "not at all serious"). The Lowe study compared the patients' answers on the "serious scale" with different "explicit criteria" for the physician definition of emergency, whereas we used the same questions for physician and patient. In addition, in the Lowe study, the physician

assessments were retrospective and our study used "real-time" physician assessments.

In our study, the participant characteristics age and nurse-triage were significantly associated with meeting the prudent layperson standard (defined as answering "yes" to any of the 4 survey questions) and patient / physician agreement. In both cases, at the limits, the agreement was better. For age, it may be that the physician was more likely to agree that the patient met the prudent layperson standard because the potential bad outcomes are worse at the extremes of age. To my knowledge, correlation with pediatric studies has not been done to test this. The nurse-triage categories 2 and 4 had the best agreement. This result is intuitive; it makes sense that better agreement is seen at the extremes of nurse-triaged urgency.

In our study ethnicity was not statistically associated with meeting the definition of emergency visit. In a prior study by Brown, ethnicity was reported to be associated with patient perceptions of acuity.[46] They found that African-Americans had a significantly higher desire for more emergent care (compared with Caucasians, Native Americans and "unknown" and "more emergent" meaning a self-estimated need for care in fewer hours for the same complaint). Again, the discrepancy in findings may be due to varied ways of measuring the same thing. In the Brown study, the patients did not use a prudent layperson standard-type definition of emergency; instead they used a scale based on the number of hours in which they thought they needed to be seen. Another important difference between the Brown study and ours is setting. The Brown study was a survey given out to laypeople outside of the emergency department; the participants in their study were not sick at the time of filling out the survey. It may be important to have the patient in the "real-life" situation of being sick to get a true opinion about how badly they need care. It could be that the non-African-American participants in the Brown study filled out their survey about emergency department care without thinking that it would actually be them in the emergency department.[46]

The last two questions were **5)** *I was told to come to the hospital by a doctor, nurse, or other health professional,* and **6)** *I came here today because I don't have a doctor, and/or couldn't get a doctor's appointment, and/or didn't know where else to go for help.* These questions were meant to get at other reasons that a "reasonable" person may come to the emergency department that are not specifically written in the federal prudent layperson standard definition. If we include "yes answers" to questions 5 and 6 to define a "reasonable" person standard of emergency visit then 97.8% (vs. 92% using only questions 1-4) of our study participants thought that they had a "legitimate" reason to come to the emergency department. **{See Appendix1: Table 2}** Grumbach et al reported that 38% of the patients in their emergency department waiting room would trade their emergency department visit for a clinic appointment in 1 to 3 days.[47] Many other studies have found that often the "inappropriate" emergency department visits may be "appropriate" if more of the patients' circumstances are understood.[11,4,48,49,50,51]

III. Situation of Enforcement and Reimbursement

The debate on treating unfunded or unauthorized emergency patients was curtailed in 1986 by the Emergency Medical Treatment and Active Labor Act (EMTALA).[52] This federal law requires screening and stabilization to all who seek emergency department care, regardless of ability to pay, and it threatens physicians and hospitals with explicit legal and financial penalties for noncompliance. There is no accompanying requirement for third parties or managed care to support such a mandate because they merely deny payment, not treatment. In most states, payers in federal and private sectors can deny payment for required emergency screening and treatment without fear of reprisal. Under EMTALA, the provision of basic emergency care has become one of the few rights to healthcare in US law.[52]

Reimbursement for emergency care is closely related to access to emergency care. Without enforcement of laws that protect against denials, the laws have not proved to be very effective. In the last couple years focus on the reimbursement for emergency department care has been an important issue to those interested in protecting emergency department access.

Unfortunately the way that an insurer defines an emergency medical condition can be confusing. Often the official statement defining an EMC, the instructions given to members, and the definition reflected in the actual denial of claims may all be contradictory.

The Vice President for the California American College of Emergency Physicians (CACEP), Loren Johnson, wrote an editorial in the Annals of Emergency Medicine about insurer misinformation regarding access to emergency care.[53] Johnson described a variety of newsletters to California health insurance plan enrollees "in which obvious emergencies, such as stroke and heart attack, are juxtaposed with conditions listed as "nonemergencies" (eg, asthma and fever), for which access to emergency care is discouraged." In addition, the author also encountered numerous health plan ID cards with the following instructions: ""In case of emergency, call your primary care physician." This implies that the plan has a requirement for preauthorization in advance of any decision to obtain emergency care." [53]

A study examined instructions from fifteen insurers, specifically in regard to definition of an emergency condition and associated instructions, because of anecdotal concerns suggesting that the instructions may deter members from calling 911 or going to an emergency department for a perceived emergency.[54] The authors found that instructions and definitions varied widely. Six insurers (40%) included chest pain in their definition of an emergency; 2 (13%) included symptoms of stroke. Ten (67%) made mention of calling 911 or going to the emergency department somewhere within their instructions; 4 (27%) provided no options for calling 911 or seeking emergency department care. Three (20%) cited higher costs associated with emergency department care. Eleven (73%) indicated

that claims would be denied for visits determined on retrospective review to be nonemergencies.[54]

Viner examined patient knowledge of insurer (primarily MCO) regulations, the availability of alternative ambulatory care, and the outcomes of patients denied payment for the emergency department visit by their insurer.[55] They found that few patients are aware of the need for MCO preauthorization for reimbursement of emergency department care, and almost half do not receive alternative care within 24 hours. They reported that a significant number of patients (11%) returned to the emergency department with an admission rate of 4%.[55]

Without a federal law to regulate the reimbursement for non-Medicare/Medicaid "prudent layperson" visits, 32 states have individually adopted some type of "prudent layperson" standard legislation. Despite many states passing prudent layperson legislation, studies evaluating the reimbursement for emergency visits in these states have not been encouraging. In North Carolina, 2 statutes enacting the prudent layperson standard were approved September 3, 1997,[56] and September 17, 1997,[57] and both became effective January 1, 1998. After the implementation of these laws, Tintinalli retrospectively reviewed 200 emergency department visit denials and found that a large proportion of their emergency department visits for which payment was denied as "not a medical emergency" met the Prudent Layperson definition of an emergency.[58]

Although we have not finished analyzing the data for the reimbursement portion of our study, one of the major insurers in the study population area, BCBS, has made our point for us. Recently, the North Carolina Blues plan told the state's Department of Insurance that it had wrongly withheld about $15 million in payments for emergency room services in about 182,000 cases beginning in 1998. The insurer told regulators it underpaid patients who filed claims for ER visits, and as a result patients paid more for services than they should have. In addition, it paid providers less than they were owed. The BCBS plan said it discovered the emergency department claims error during an internal review and became aware of the full extent of the problem in late 2002.[59]

North Carolina Department of Insurance spokesperson Chrissy Pearson noted that "the timing of the disclosure -- just a few weeks before a previously scheduled routine audit of the plan by state insurance regulators -- raised some eyebrows at the insurance department, especially since the company has a history of waiting until just before routine audits to disclose problems." Pearson reported that in 2001 the North Carolina Blues plan had identified a similar problem with ER claims for HMO members, and waited until a month before a scheduled visit from regulators to reveal that problem.[59]

New York is another state with prudent layperson standard legislation that prohibits health plans from requiring prior authorization for emergency services (Public Health Law Sections 4902 and 4905).[60] Accordingly, health plans are not permitted to require prior authorization for services to treat emergency conditions or to hold a member liable for the cost of those services if a member's condition meets the prudent layperson standard ([Public Health Law Sections 4900, 4902, 4905; 10 NYCRR 98-1.5(b)).[60] Even with the prudent layperson standard laws in place, emergency physicians and patients in New York complained of significant problems with emergency department visit reimbursement denials. Partially in response to the complaints, in 2001, the New York Attorney General announced a significant agreement with one of their major insurers (Blue Cross and Blue Shield of the Rochester area) which required the health plan to reimburse consumers who were erroneously billed for emergency room claims that should have been fully covered by the plan.[60]

In another example, Michigan had a similar experience. In 1997, the state of Michigan passed a law (Public Act 136 of 1997) requiring Medicaid managed care organizations (MMCOs) to pay for emergency services whenever presenting symptoms constituted an "emergency medical condition." Like most state prudent layperson laws, the wording of their law is very similar to the EMTALA and Balanced Budget Act wording of an emergency medical condition. A study published in 2000 evaluated MMCO reimbursement before and after enactment of this state law. It found that "reimbursement by MMCOs for a procedure chosen to reflect a state-defined "emergency medical condition" was inadequate and

significantly decreased during the 2 periods, with a significant increase in MMCO patients evaluated."[61] The hypothesis of the authors of the Michigan study was the financial interest of some MMCOs may be best served by denying as many claims as possible, hoping that a substantial number will not be disputed. The authors included that the penalty under Michigan state law (Public Act 114 of 1999) for failing to provide reimbursement for at least 90% of Medicaid claims within 30 days of receipt is "an interest charge."[61]

Florida is another state that passed prudent layperson standard legislation, but had a mixed result. In 1996, two Florida laws were implemented to prevent denial of legitimate emergency department patient billing claims. Seaburg examined the effectiveness of the laws in reducing inappropriate denials as measured by the proportion of claims and charges denied. They found that after initiation of state legislation, payers continued to inappropriately deny claims, but the number of claims and total charges denied decreased. Unfortunately, they also found that in response to this legislation, payers were denying larger claims and patient co-payments increased.[62]

In a four state study, all with prudent layperson standard legislation, 1,980 emergency department visits were analyzed in a prospective cohort study reported in 2002. This study was performed at 12 academic and community hospital emergency departments, involving consecutive emergency department patients, with managed care insurance. Emergency department visits were analyzed to compare emergency department coding with professional fee billing reimbursements. The study found that, overall, almost two thirds of all emergency department claims were initially denied, and reimbursed claims were uniformly downcoded. On appeal, reimbursement was often reinstated or increased, although billing services only appealed about half of emergency department visits.[63]

Access to emergency care has been legislated, protected and regulated, but reimbursement for the visit has not been as completely dealt with. The protection by law is not complete and the enforcement of the existing laws is deficient. The end result is a barrier to emergency care that will disproportionately affect the

most price sensitive group, the poor.[1,2,19] Each time a visit gets denied unfairly that patient and their friends and family might perceive emergency care as uncovered and expensive care. The next time that they have a potential emergency, the memory of the expensive visit might be part of their calculation. It is a potential deterring factor for patients seeking emergency care; therefore, it is potentially harmful. It is especially disturbing that emergency visit denials might be disproportionately harmful to the poor. It is counter to the ideals and values that many emergency nurses and physicians hold dear.

Options: Enforcement of Reimbursement for Emergency Care [64]

Overview of Alternatives

In response to the problem of ensuring access to covered emergency care, many policy potions can be considered. I will not go into detail about all the possible imagined alternatives, but only the alternatives that, in my opinion, are politically feasible. For instance, universal health care coverage or universal emergency care coverage could accomplish the goal of covering emergency care for every American (including uninsured), but I am not including a serious discussion of implementing a federal universal health plan because of how I interpret the present political realities.

The policy alternatives that I will focus on can be generally categorized into four subheadings; policies that: maintain state-centered regulation (i.e. status quo), independent regulatory options (i.e., could be added to existing or new regulatory systems - "independent" of the other options), expand federal regulation (basically status quo under a uniform federal law), or expanded federal regulation plus options. These alternatives are definitely not mutually exclusive and, by design, they are not meant to be a complete list of alternatives.

Criteria for Evaluation of Alternatives

Implementation of each of the alternatives, including maintenance of the status quo, would affect many of the stakeholders. It is impossible to divorce an evaluation of alternatives from the needs and goals of the involved stakeholders. To direct discussion of each alternative I will use criteria that are based on evidence of, and my perceptions of, the needs and goals of the listed stakeholders **(See Appendix 2 - Stakeholders)**. As a disclaimer, this is not an exhaustive list, some of the criteria will be in conflict with other criteria, and some will hold different amounts of importance compared to others. Theoretically, the best alternatives will be the ones that meet as many of the criteria as possible. These criteria are:

- (1) Ensure patient safety – i.e., safeguards that result in the elimination of financial deterrents to seeking emergency care.
- (2) Includes a "prudent layperson" definition of "medical necessity," or an equally sensitive alternative.
- (3) Ensure hospital or patient reimbursement for legitimate emergency department care claims.
- (4) Ensure reimbursement for legitimate specialty or post-stabilization claims.
- (5) Establish a system for reporting claims that allows insurance companies to efficiently review claims – consistent with the current laws.
- (6) Avoid regulations that force insurance companies to cover explicitly excluded services.
- (7) Avoid regulations that encourage emergency department utilization for non-urgent complaints.
- (8) Encourage clear communication between insurance companies and participants about their coverage and the availability of covered emergency department services or alternatives.

- (9) Avoid denials and long reviews for legitimate emergency department claims.
- (10) Considers and offers solutions for the concerns of self-insured or small business employers.
- (11) Considers and offers solutions for the financial and organizational demands of changing the reporting system.
- (12) Legal/liability issues – depending on the stakeholder, the goal may be to minimize or allow for litigation to enforce regulations.
- (13) Allow states to maintain (current) or add regulations where they expand versus limit and are not in conflict with the federal patient protections.

Evaluation of Alternatives

Maintain State Centered Regulation

The option for federal regulation of emergency care and reimbursement is essentially to do nothing new – federally. The current federal regulation of emergency care and reimbursement is derived from ERISA (1974), EMTALA (from COBRA) of 1985, and the 1997 Balanced Budget Act. Largely the laws establishing a definition for emergent care and support for its insurance coverage have been state laws. Starting in 1993, a prudent layperson standard for defining a covered emergency service has been established in individual states. The Balanced Budget Act established a prudent layperson standard of access for all Medicaid and Medicare patients. An option to consider is to maintain a federal law effecting Medicare and Medicaid patients and allow states to add protections for additional persons as they choose.

Since 1992, 41 states have enacted some form of prudent layperson standard definition for emergencies (32 with what ACEP considers "real" PLS laws). This means that most states have existing regulations and are addressing this issue to some extent. A few stakeholders will want to maintain the

independence of the state to regulate this issue for differing reasons. Some advocates of patients' rights will be concerned that a federal law will be weaker than already existing state regulations. Others, for instance regional insurance plans, may resist federal regulation if they are already set up to comply with their state regulations.

Problems with the existing system are lack of uniformity and lack of compliance with the current federal (BBA '97) and state prudent layperson standard reimbursement laws. In light of the above criteria, this is an option that maintains state-centered regulation and compared to introduction of new laws supporting increased liability, the insurance plans will be better off regarding that concern. **[See Appendix 2- Options Table]**

Independent Regulatory Options

There are some options that can be considered independent of federal and state laws to enforce prudent layperson standard visit reimbursements. These are options that may be implemented with or without any change in federal or state prudent layperson laws.

- *New monitoring system* – Since a great deal of the current problem is in the enforcement of existing laws that mandate coverage for prudent layperson standard emergencies, a new monitoring system is an alternative. Even without expanded BBA-type laws, this could at least improve the reimbursement for the millions of Medicare and Medicaid patients. The monitoring system might resemble the OEI (Office of Evaluation and Inspections) of the OIG (Office of Inspector General) and HCFA monitoring system for EMTALA. The penalties imposed for insurance companies found to be making claims decisions inconsistent with the current laws might range from fines to litigation. If a federal prudent layperson standard for coverage of emergencies

were passed, the monitoring would extend to non-Medicare/Medicaid companies.

- *Codes of Conduct for Insurers* – All health insurers could be encouraged to agree to a uniform "code of conduct" statement. The AAHP (Association of American Health Plans) has developed a "code of conduct" that includes reimbursement for emergency care.[65] This could state that they will cover all "emergent care" consistent with a prudent layperson standard. In addition, they agree to avoid long reviews and denials of legitimate emergency department claims.
- *New "Rules of Engagement"*- Health plans report that a significant part of their noncompliance with prudent layperson standard a reimbursement law has to do with the current billing system.[66] In 1999, the Maryland Insurance Commissioner dropped a two-year investigation of several carriers although he found that many claims were not paid that should have been under state and federal law. It was reported that the commissioner refused to fine insurers because he concluded that they could not change a confusing billing process. An option that addresses this is to encourage or mandate uniform "rules for engagement" for insurance plans and providers about information collection. This could include defining what information is sufficient and collection/coding chief complaint versus diagnosis information. It also may be important to subsidize the conversion of claims software systems to be based on chief complaint instead of diagnosis codes. This would encourage plans compliance with state and federal laws and may reduce the number of inappropriate claim denials. A uniform information collection form is included in a "patients rights" senate bill now being considered (S.6).[67]

These "independent" options could fill in some gaps in the existing system or be added to a new system of regulation. A new monitoring system largely speaks to the concerns of enforcement of policies. This could be an improvement from the status quo. Implicit in this option is the possibility of relying on the use of fines

versus lawsuits. This would appeal to insurance companies that have liability issues as a primary concern. The code of conduct option may help, but it is a relatively weak alternative without any explicit enforcement regulation. New "rules of engagement" may be useful in terms of most of the criteria, but it might result in increased costs to implement it.

Expand Federal Regulation

Expanding federal regulation for enforcement of prudent layperson standard-defined emergencies to non-Medicare/Medicaid insured is another option. Generally this would mean that all insured people are guaranteed coverage for emergency department visits that they think are emergencies. There are different ways to approach federally mandated coverage for prudent layperson standard-defined emergencies:

- *Included in "Patient Bill of Rights" Bills* - In the wake of last summer's dual passage of patient protection legislation (H.R. 2563 and S. 1052), both including mandated coverage for prudent layperson standard-defined emergency care, including protections for coverage of emergency care in Patients Rights bill is an option. Last summer's bills eventually died in conference committee, largely because of disputes about liability and litigation portions of the bills.[67]
- *Independent Emergency Services Bill* - There have been attempts to pass legislation enacting the prudent layperson standard for covered emergency care separate from a comprehensive "Patient Bill of Rights" since 1995 ("Access to Emergency Services Act" first introduced in 1995).[65] The current senate "Access to Emergency Medical Services Act of 2001" (S.283), has been referred to the committee on Finance and has not gained significant attention during the 107th congress.[68] But, an independent, federal, emergency services patient protection law is certainly an option.[67]

These options may offer improvements based on the most of the criteria. It is liability issues that have held up the past bills that include prudent layperson standard coverage language. Coverage for emergency care was included, and agreed upon, in both the house and senate versions of "patients" rights" bills. An independent emergency services bill, without additional "patient protections" is a possible way to avoid that battle and still get a bill passed that meets the other criteria. **[See Appendix 2- Options Table]**

Federal Regulation Plus Changes

There are additional options that can be considered in addition to the proposed federal emergency care laws (the options discussed above). These options are additional federal-level regulations meant to enforce current or new federal prudent layperson standard coverage reimbursement.

- *Shift Burden of Proof for Claims Denial* - An additional option is to change the current claims denial process so that a physician / patient defined emergency visit is covered until proven to be inappropriate. This would shift the burden of proving that the visit is not an emergency to the insurance company versus the hospital or patient. This could be an option without a uniform federal law as well, but it would be more difficult to implement because insurance companies can span multiple states, each possibly with different prudent layperson standard laws.
- *Expand Liability* – Litigation is another way to enforce mandated coverage. A federal liability statement for health plan decisions allows for uniformity in contract interpretation. In Senator Edward's 2001 Bipartisan bill, cases involving "administrative decisions" were treated differently than cases involving "medically review able" decisions (the former heard in federal court).[67]

  Along with this alternative, are options that further address different stakeholders needs, including: "exhaustion requirements,"

requirements that patients exhaust internal and external appeals before going to court, punitive damage options (prohibition, caps, etc.), protections from lawsuits for employers, and protections from lawsuits for physicians.

The option to change the burden of proof largely addresses criteria 3, 4 and 9 – ensuring timely reimbursements, but may not meet other criteria. Insurance companies may worry that this option would increase costs to them and increase inappropriate emergency department visits. Expanding liability to insurance companies is very unpopular to some stakeholders – especially insurance companies. Compromises about the terms of this type of legislation could be made, but it is not likely to be an easy battle. **[See Appendix 2- Options Table]**

Conclusion

Defining an emergency remains difficult. Our study (Section II) revealed fair physician / patient agreement when asked PLS-defined emergency visit classification questions. The agreement found in our study was better than what was found in most previous similar studies. It is possible that "real-time" classification by the emergency physicians contributed to the better agreement.

The definition of an emergency visit will continue to be debated. The varied stakeholders are powerful and committed to their positions. A Prudent Layperson standard of defining an emergency is largely accepted by providers, patients and most lawmakers.[69] Some stakeholders are not satisfied with the vagueness of the Prudent Layperson standard. A variety of stakeholder values make a more specific definition difficult- including poor agreement and poor success when trying to define the urgency of an emergency department visit prospectively or retrospectively. The best agreement results and results in predicting urgency (when using disposition as outcome) have been from "real-time" assessments.[22,6,20,46] Some novel systems have been implemented to try to incorporate "real-time" classification of emergency department patient visits.[27]

An economic benefit is not obvious though, because of the high cost of initiating and maintaining a "real-time" classification system. For the large part, emergency department visits are classified by retrospective chart review. In this context, a protection against emergency department claim denials is critical.

Retrospective emergency department claim denial is an important concern. The reimbursement for emergency care is closely related to access to emergency care. Without assurance that a visit to the emergency department will be covered, a patient may choose to put of a visit when they should not. The Federal 1997 Balanced Budget Act includes legislation meant to assure reimbursement to Medicare and Medicaid patients for emergency department visits. In addition, many states have laws that extend those protections to patients with private insurance. Unfortunately, the uninsured, the non-Medicaid / Medicare patients in the states without extension laws, and the thousands of people insured through an ERISA – regulated plan do not have any assurance of reimbursement for emergency department visits.

Another problem with current patient protections is that they are not enforced. Many options for increased enforcement of prudent layperson laws were discussed in Section III of this paper. Any options that are considered must be evaluated in the context of an evolving political climate.

Appendix 1: Tables & Figures

Table 1a. Participant Demographics by Gender

Characteristic	Mean (s.d.) or Number (n = 361)	Total %	Male (s.d.) or Percent (n = 148)	Female (s.d.) or Percent (n = 213)	P Value
Mean Age (18 - 89)	(n = 361)		(n = 148)	(n = 213)	
	47.35 (18.14)		47.63 (16.65)	47.15 (19.14)	0.8077
Age <40	140	38.8%	35.80%	40.80%	
≥40	221	61.2%	64.20%	59.20%	
Consent	(n = 401)		(n = 163)	(n = 238)	
% Gave Consent	361	90.0%	41.0%	59.0%	0.669
% Witheld Consent	40	10.0%	37.5%	62.5%	
Ethnicity^	(n = 361)		(n = 148)	(n = 213)	
% White	247	68.4%	43.7%	56.3%	0.227
% Black	102	28.3%	36.3%	63.7%	
% Other	12	3.3%	25.0%	75.0%	
Triage**	(n = 361)		(n = 148)	(n = 213)	
% Level 2	77	21.3%	46.8%	53.2%	0.093
% Level 3	206	57.1%	36.9%	63.1%	
% Level 4	70	19.4%	42.9%	57.1%	
% Level 5	8	2.2%	75.0%	25.0%	
Mean Triage Level	3.02 (0.705)		3.04 (0.781)	3.01 (0.648)	0.7262
Insurance	(n = 361)		(n = 148)	(n = 213)	
% Medicare and Medicaid of any kind	**135**	**37.4%**	**26.4%**	**45.1%**	0.004
% Medicare Total (without Medicaid)	67	18.6%	12.8%	22.5%	
% Medicare Only (includes MMCO)	29	8.0%	3.4%	11.3%	
% Medicare plus Any Private Insurance	38	10.5%	9.5%	11.3%	
% Medicare plus BCBS	11	3.0%	4.7%	1.9%	
% Medicare plus Other Commercial	27	7.5%	4.7%	9.4%	
% Medicaid Total (without Medicare)	41	11.4%	8.1%	13.6%	
% Medicaid MCO	17	4.7%	1.4%	7.0%	
% Medicaid Other	24	6.6%	6.8%	6.6%	
% Medicare plus Medicaid	27	7.5%	5.4%	8.9%	
% MCO (HMO/PPO)	**106**	**29.4%**	**35.1%**	**25.4%**	
% Non-BCBS MCO	72	19.9%	20.9%	19.2%	
% BCBS only	33	9.1%	13.5%	6.1%	
% BCBS plus Other Private Insurance	1	0.3%	0.7%	0.0%	
% Other Commercial Non-MCO	**28**	**7.8%**	**8.1%**	**7.5%**	
% Worker's Compensation	**8**	**2.2%**	**2.0%**	**2.3%**	
% Uninsured	**79**	**21.9%**	**26.4%**	**18.8%**	
% Unknown/Other (includes Veterans Service)	**5**	**1.4%**	**2.0%**	**0.9%**	

* Means and p values based on 2-sample t-tests (continuous data), Pearson's correlation (categorical data), or Spearman's correlation (ordinal data)

** Level 1 designated triage patients excluded from study

Table 1b. Participant Demographics by Consent

Characteristic	Mean (s.d.) or Number (n = 401)	Consent (s.d.) or Percent (n = 361)	No Consent (s.d.) or Percent (n = 40)	*P* Value*
Mean Age (range: 18 - 89)	48.20 (18.22)	47.35 (18.14)	56.32 (17.12)	0.0038
	(n = 399)	(n = 361)	(n = 38)	
Gender	(n = 401)	(n = 361)	(n = 40)	
% Male	163	41.0%	37.5%	0.669
% Female	238	59.0%	62.5%	
Ethnicity	(n = 401)	(n = 361)	(n = 40)	
% White	267	68.4%	50.0%	0.042
% Black	121	28.3%	47.5%	
% Other	13	3.3%	2.5%	
Triage^	(n = 401)	(n = 361)	(n = 40)	
% Level 2	89	21.3%	30.0%	0.1112
% Level 3	229	57.1%	57.5%	
% Level 4	74	19.4%	10.0%	
% Level 5	9	2.2%	2.5%	
Mean Triage Level	3.01 (0.705)	3.02 (0.705)	2.85 (0.700)	0.1369

* Means and P values based on 2-sample t-tests (continuous data), Pearson's correlation (categorical data), or Spearman's correlation (ordinal data)
^ Level 1 designated triage patients excluded from study

Table 2: Bivariate Analysis Results- Survey Answers by Participant Characteristics

Variables		Number Consented	Percent MD Thought Met PLS*	P value†	Percent Patients Thought Met PLS (Q 1-4)§	P value†	Percent Patients Thought Met PLS (Q 1-6)¶	P value†	Percent MD/ Patients in Agreement (Q 1-4)§	P value†	Kappa (P value†)	Percent MD/ Patients in Agreement (Q 1-6)¶	P value†	Kappa (P value†)
Age Range	10-19	10	80.0%	0.005	90.0%	0.080	90.0%	0.426	80.0%	0.001	0.6154 (0.0175)	80.0%	0.008	0.6154 (0.0175)
	20-29	58	50.0%		82.8%		96.6%		43.1%		0.0690 (0.2435)	48.3%		0.0000 (0.5000)
	30-39	72	59.7%		88.9%		95.8%		56.9%		0.1818 (0.0168)	59.7%		0.1211 (0.0156)
	40-49	68	73.5%		94.1%		98.5%		70.6%		0.0947 (0.1358)	73.5%		0.0796 (0.0466)
	50-59	59	76.3%		96.6%		100.0%		74.6%		0.0698 (0.1871)	76.3%		0.0000 (–)
	60-69	48	72.9%		95.8%		97.9%		70.8%		0.0659 (0.2281)	72.9%		0.1084 (0.0486)
	70-79	22	90.9%		100.0%		100.0%		90.9%		0.0000 (0.5000)	90.9%		0.0000 (0.5000)
	80-89	24	66.7%		91.7%		100.0%		62.5%		0.0769 (0.3008)	66.7%		0.0000 (–)
		(n = 361)												
Dichotomized Age	Age <40	140	57.1%	< 0.001	86.4%	0.002	95.7%	0.033	52.9%	<0.001	0.1549 (0.0077)	56.4%	<0.001	0.0798 (0.0203)
	Age ≥40	221	75.1%		95.5%		99.1%		72.9%		0.0857 (0.0301)	75.1%		0.0336 (0.0068)
		(n = 361)												
Gender	Females	213	66.2%	0.341	91.1%	0.457	97.2%		62.9%	0.296	0.1427 (0.0023)	65.7%	0.296	0.0804 (0.0046)
	Males	148	70.9%		93.2%		98.6%	0.352	68.2%		0.1312 (0.0128)	70.9%		0.0647 (0.0130)
		(n = 361)												
Triage Level (level 1 excluded from study)	2	77	89.6%	< 0.001	97.4%	0.0003	98.7%	0.0365	88.3%	<0.001	0.1653 (0.0314)	89.6%	<0.001	0.2038 (0.0016)
	3	206	71.4%		93.7%		99.0%		68.4%		0.1015 (0.0189)	71.4%		0.0477 (0.0124)
	4	70	40.0%		82.9%		92.9%		34.3%		0.0404 (0.3023)	38.6%		0.0488 (0.1717)
	5	8	25.0%		75.0%		100.0%		25.0%		0.2000 (0.1729)	25.0%		0.0000 (–)
		(n = 361)												
Ethnicity	White	247	69.2%	0.312	90.7%	0.327	98.0%	0.755	66.0%	0.262	0.1868 (0.0001)	69.2%	0.252	0.0888 (0.0004)
	Black	102	63.7%		94.1%		97.1%		60.8%		0.0426 (0.2355)	62.7%		0.0482 (0.1392)
	Other	12	83.3%		100.0%		100.0%		83.3%		0.0000 (0.5000)	83.3%		0.0000 (0.5000)
		(n = 361)												
Insurance	Medicare Only (includes MMCO)	29	86.2%	0.167	96.6%	0.340	100.0%	< 0.001	86.2%	0.119	0.3650 (0.0055)	86.2%	0.169	0.0000 (–)
	Medicare plus Any Private Insurance	27	70.4%		96.3%		100.0%		66.7%		-0.0705 (0.7458)	70.4%		0.0000 (–)
	Medicare plus BCBS	11	81.8%		90.9%		100.0%		81.8%		0.6207 (0.0130)	81.8%		0.0000 (0.5000)
	Medicaid MCO	17	70.6%		94.1%		94.1%		64.7%		-0.1087 (0.7471)	64.7%		-0.1087 (0.7471)
	Medicaid Other	24	83.3%		95.8%		100.0%		79.2%		-0.0714 (0.6761)	83.3%		0.0000 (0.5000)
	Medicare plus Medicaid	27	70.4%		92.6%		96.3%		66.7%		0.0924 (0.2560)	70.4%		0.1674 (0.0582)
	MCO (HMO/PPO)	72	59.7%		91.7%		97.2%		58.3%		0.1713 (0.0124)	59.7%		0.0813 (0.0404)
	BCBS Only	33	66.7%		90.9%		100.0%		63.6%		0.1667 (0.0995)	66.7%		0.0000 (–)
	BCBS plus Other Private Insurance	1	0.0%		0.0%		0.0%		0.0%		–**	0.0%		–**
	Other Commercial Non-MCO	28	64.3%		89.3%		96.4%		60.7%		0.1711 (0.1182)	64.3%		0.1250 (0.0859)
	Worker's Compensation	8	62.5%		87.5%		100.0%		50.0%		-0.2308 (0.7962)	62.5%		0.0000 (–)
	Uninsured	79	62.0%		89.9%		97.5%		58.2%		0.1229 (0.0658)	62.0%		0.0814 (0.0336)
	Unknown/Other (includes Veterans Service)	5	100.0%		100.0%		100.0%		100.0%		–**	100.0%		–**
		(n = 361)												
Total		361	68.1%	–	92.0%	–	97.8%	–	65.1%		–	67.9%		–

* PLS = prudent layperson standard

† Means and p-values based on Pearson's correlation (categorical data) or Spearman's correlation (ordinal data)

§ Questions 1-4 on the survey corresponding to a basic prudent layperson standard

¶ Questions 1-6 on the survey corresponding to a more extended prudent layperson standard

** Too few rating categories or too few cases in the category to calculate a kappa value

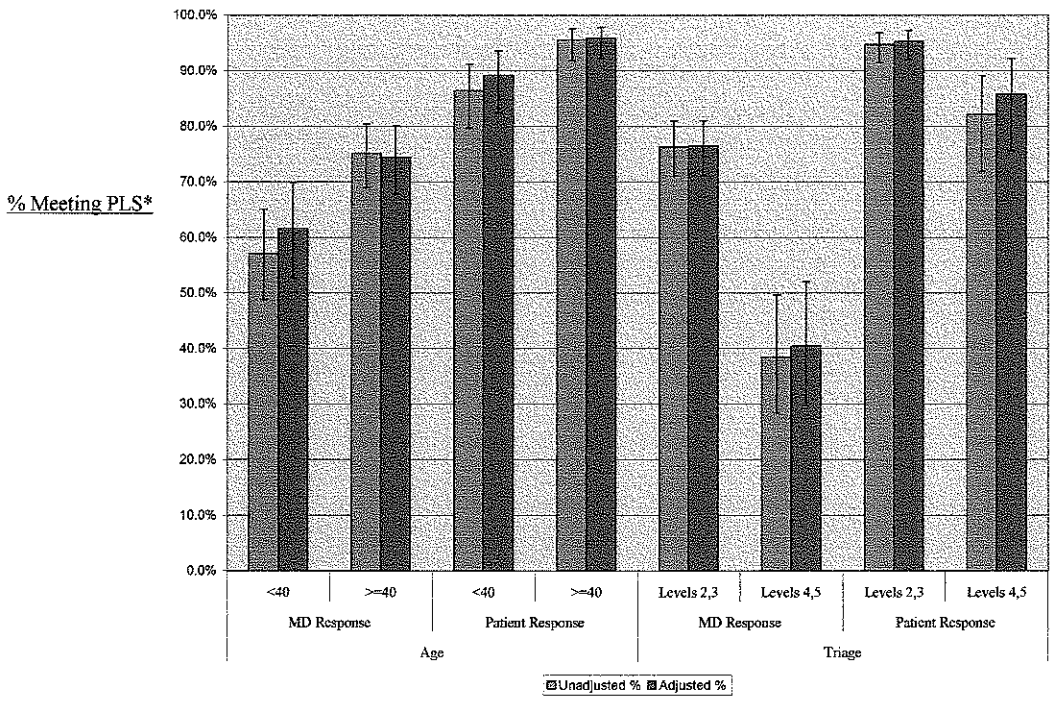
Table 3. Logistic Regression Results – Adjusted^ Survey Answers by Participant Characteristics

		Unadjusted						Adjusted				
	Characteristic	(n)	RR	95% CI	%	*P* value	95% CI	OR	95% CI	%	*P* value	95% CI
Age	**MD Response**											
	Age ≥40 / <40		1.31	(1.12 - 1.55)				1.81	(1.11 - 2.96)			
	<40	140			57.1%	0.0004	(48.8 - 65.1)			61.6%	0.0184	(52.7 - 69.9)
	≥40	221			75.1%	0.0004	(69.0 - 80.4)			74.4%	0.0184	(67.8 - 80.0)
	Patient Response											
	Age ≥40 / <40		1.10	(1.03 - 1.19)				2.80	(1.21- 6.48)			
	<40	140			86.4%	0.0024	(79.7 - 91.2)			89.2%	0.0142	(82.4 - 93.6)
	≥40	221			95.5%	0.0024	(91.8 - 97.5)			95.8%	0.0142	(92.2 - 97.8)
Gender	**MD Response**											
	Male / Female		0.93	(0.81 - 1.07)				0.74	(0.43 - 1.21)			
	Male	148			70.9%	0.3395	(63.1 - 77.7)			73.5%	0.2204	(65.2 - 80.5)
	Female	213			66.2%	0.3395	(59.6 - 72.2)			67.1%	0.2204	(60.0 - 73.4)
	Patient Response											
	Male / Female		0.98	(0.92 - 1.04)				0.68	(0.30 - 1.57)			
	Male	148			93.2%	0.453	(87.9 - 96.3)			95.1%	0.3629	(90.4 - 97.6)
	Female	213			91.1%	0.453	(86.4 - 94.2)			93.0%	0.3629	(88.4 - 95.8)
Triage	**MD Response**											
	Triage ≥4 / ≤3		0.50	(0.38 - 0.67)				0.21	(0.12 - 0.36)			
	≤3	78			76.3%	< 0.0001	(71.0 - 80.9)			76.4%	< 0.0001	(71.0 - 81.1)
	≥4	283			38.3%	< 0.0001	(28.4 - 49.7)			40.4%	< 0.0001	(29.7 - 52.0)
	Patient Response											
	Triage ≥4 / ≤3		0.87	(0.79 - 0.96)				0.30	(0.13 - 0.68)			
	≤3	78			94.7%	0.0008	(91.4 - 96.8)			95.2%	0.0048	(92.0 - 97.2)
	≥4	283			82.1%	0.0008	(71.9 - 89.1)			85.8%	0.0048	(75.6 - 92.2)
Ethnicity	**MD Response**											
	White / non-White		1.05	(0.90 - 1.23)				1.10	(0.67 - 1.84)			
	White	247			69.2%	0.5156	(63.2 - 74.7)			70.4%	0.7008	(64.0 - 76.1)
	non-White	114			65.8%	0.5156	(56.6 - 73.9)			68.3%	0.7008	(58.7 - 76.6)
	Patient Response											
	White / non-White		0.96	(0.90 - 1.02)				0.48	(0.19 - 1.25)			
	White	247			90.7%	0.1729	(86.4 - 93.7)			92.5%	0.1153	(88.1 - 95.3)
	non-White	114			94.7%	0.1729	(88.8 - 97.6)			96.2%	0.1153	(91.3 - 98.4)
Insurance	**MD Response**											
	No insurance / Insured		0.89	(0.74 - 1.07)				0.98	(0.55 - 1.75)			
	No Insurance	79			62.0%	0.1913	(50.9 - 72.0)			69.4%	0.9355	(57.5 - 79.1)
	Insured	282			69.9%	0.1913	(64.2 - 74.9)			69.9%	0.9355	(63.9 - 75.3)
	Patient Response											
	No insurance / Insured		0.97	(0.90 - 1.05)				1.10	(0.44 - 2.72)			

* *P* values based on Pearson's correlation

^ Using logistic regression, adjusted for the other variables in the model: age, gender, triage, ethnicity, insurance

Figure 1: Graph of % Meeting PLS* by Age & Triage Variables



^ Using logistic regression, adjusted for the other variables in the model: age, gender, triage, ethnicity, insurance
*Meeting PLS defined as any "yes" answer on survey questions 1-4

Table 4. Logistic Regression Results- All Age & Triage Results (dichotomized and segmental results)

	Variable	n	OR	95% CI	Adjusted %	*P* value	95% CI
Age	**MD Response**						
	≥40 / <40	361	1.86	(1.15 - 3.00)			
	<40	140			61.6%	0.0184	(52.7 - 69.9)
	≥40	221			74.4%	0.0184	(67.8 - 80.0)
	10-29	68			61.5%	0.3611	(48.7 - 72.9)
	30-49	140			68.2%	0.3611	(59.5 - 75.8)
	50-69	107			73.2%	0.3611	(63.3 - 81.2)
	70-89	46			76.3%	0.3611	(60.7 - 87.1)
	Patient Response						
	≥40 / <40	361	2.71	(1.19 - 6.15)			
	<40	140			89.2%	0.0142	(82.4 - 93.6)
	≥40	221			95.8%	0.0142	(92.2 - 97.8)
	10-29	68			88.5%	0.1754	(78.4 - 94.2)
	30-49	140			92.3%	0.1754	(86.3 - 95.7)
	50-69	107			96.4%	0.1754	(90.6 - 98.7)
	70-89	46			96.0%	0.1754	(84.9 - 99.0)
Triage	**MD Response**						
	Triage ≥4 / ≤3	361	0.22	(0.13 - 0.37)			
	Level 2	89			88.9%	< 0.0001	(79.3 - 94.4)
	Level 3	229			71.9%	< 0.0001	(65.3 - 77.7)
	Level 4	74			41.6%	< 0.0001	(30.4 - 53.8)
	Level 5	9			26.7%	< 0.0001	(6.7 - 65.0)
	Patient Response						
	Triage ≥4 / ≤3	361	0.31	(0.14 - 0.69)			
	Level 2	89			97.2%	0.0271	(89.6 - 99.3)
	Level 3	229			94.6%	0.0271	(90.5 - 97.0)
	Level 4	74			86.2%	0.0271	(75.7 - 92.6)
	Level 5	9			79.0%	0.0271	(40.3 - 95.5)

* Using logistic regression, adjusted for the other variable in the model: either age or triage
^ *P* values based on Pearson's correlation

Appendix 2: Stakeholders[37]

Emergency Physicians *(ACEP, EMRA, SAEM AAEM PAC)* – Emergency medicine physicians, who are required under EMTALA to provide stabilizing care to all patients, are the most directly affected physicians by noncompliance with prudent layperson laws. Emergency departments report that they lose great a great deal of money in legitimate prudent layperson claims. The financial loss is also an opportunity loss; this is money that might go to physician's salary, hiring more ancillary staff, etc. In addition to financial reasons, physicians are also concerned that the risk of lack of reimbursement for emergency department visit claims will make patients reluctant to seek necessary care in the emergency department. Emergency physicians want a federally protected right to emergency care access using a prudent layperson definition. Emergency physicians are vested in enforcement of the reimbursement for legitimate emergency care claims. Emergency physicians wield political power via AAEM PAC political action committee of the American Academy of Emergency Medicine, ACEP, EMRA, SAEM, personal contacts, as well as alliances such as EDPMA (Emergency Department Practice Management Association). EDPMA formed an EMTALA/Prudent Layperson Task Force. Most recently, the EMTALA/ Prudent Layperson Task Force has been working to address payment practices in several states that violate the BBA 97 prudent layperson standard and are problematic under EMTALA. EDPMA helped form a coalition with ACEP and hospital associations to alert HCFA to these problems.

Other Providers *– Providers that provide the supporting / continuity care (AMA, medical specialty organizations, American Heart Association, APHA, AAFP, Red Cross)* - Emergency medicine physicians are not the only physicians that are affected by lack of reimbursement in the emergency room. Often physicians are called to the emergency department to help assess and stabilize patients. These other physicians are also vested in receiving reimbursement for legitimate claims. These organizations impact policy by joining with ACEP and other EM organizations, individual PACs, personal contacts, group letters to representatives, and alerts to members about possible policy activity.

Insurers *– (Private and state MCOs, Association of American Health Plans, etc)* – Many studies comparing standard MCO claims review and physician self-adjudication reveal a large discrepancy in approvals between the two systems. If all the claims that physicians report as fulfilling the prudent layperson definition were paid, it would mean an enormous projected cost for insurers. Insurance companies certainly have fiduciary incentives to deny claims, but, their bottom line is that they want to decide which cases fulfill a prudent layperson definition and which do not. In addition, insurers report that current billing systems are not set up to examine claims based in an admission complaint verses a discharge diagnosis. Insurers feel that they do not miss a great deal of legitimate claims and that a denied claim can always be appealed. Insurers affect policy by hiring lobbyists, PACs, pressure at the state level because of Medicaid MCOs, donations, personal contacts, and creating coalitions of health plans that collectively wield more power.

Patients (persons that utilize or may utilize emergency services) – represented by patient advocacy groups, AFLCIO, AARP, National Council of Senior Citizens, access coalitions, etc. – Organizations that represent persons relying on emergency care are interested in protections of access and reimbursement for emergency visits. They have concerns that denial of claims for emergency visits will be a deterrent to patients that need emergency care. They want to have federally protected patient rights laws including a prudent laypersons definition of emergency care. Patient organizations influence policy by lobbying, sending alerts and opinions to members, support of litigation, personal contacts, donations, and voting.

Employers / self-insured employers / small businesses – This is an important issue to companies that provide insurance. The projected costs of paying all claims that meet the prudent layperson standard is huge. They worry that these costs will ultimately affect them. They are involved in policy by organizing into lobbying groups, donations, personal contacts, and state level legislators. (Although there will be various lobby groups that may have different stands on this. Some will be more invested than others.

The Farm Bureau, NFIB, the Grange, tech company associations, all may have different views than some of the other small business groups.)

Hospitals – *(AHA American Hospital Association)* – This is a powerful stakeholder that is currently most directly feeling the financial loss. The AHA supports a prudent layperson standard and would benefit from strengthening the enforcement of claims reimbursement. AHA supports having some universal billing system that would enforce rapid turn-around for claims and avoidance of having to appeal denied claims. They affect policy through lobbying, sending/publishing/posting information for members, personal contacts, holding forums with physician and patient organizations. (Again, the AHA is a consortium of separate groupings, all with slightly different views on this issue- the teaching hospitals are strong advocates, small community and public hospitals less so).

States – Despite the balanced budget act, many Medicaid plans still use discharge diagnosis instead of presenting or chief complaint to assess payment. Many states are reporting financial crises that are caused by Medicaid costs. The increased costs of implementation of a new claims review system, much less the cost of actually paying all the claims would affect Medicaid or Medicaid MCOs. State legislators and budget-makers can affect policy on a federal level through contacts, and formal meetings and agenda setting.

Options Table

Key: For all categories except liability I have assigned "**Better,**" "**Worse**" or "**Same**" comparing status quo with the new option. **NE** means that the plan is "Not Explicit" about addressing this concern. It does not assume that this option will better or worsen the current situation. **U** means that I am undecided in the implications of this option on a certain concern. For liability, I have ↑,↓ **or** = to denote that the liability for either the insurance plan or "other" will either increase, decrease, or stay the same. I did not assign value ("Better" or "Worse") to this category because an increase or decrease in liability may be viewed differently by different stakeholders. The Category "**Pt. Safety**" combines criteria 1 & 2; "**Timely Reimbursement**" combines 3, 4 & 9; "**Efficiency & Implementation**" combines 5 & 8; "**Costs**" combines 6,7,8 &11; "**Liability**" reflects criteria 12; and "**State independence**" reflects criteria 13.

Options	Pt. Safety	Timely Reimbursement	Efficiency & Implementation	Costs – to:		Liability		State Independence
				Plan	Other	Plan	Other	
State Centered Regulation	Same	Same	Same	Same	Same	Same	Same	Same
Independent Options								
- New Monitoring System	Better	Better	NE	U	U	↑ or =	=	Same or Worse
- Codes of Conduct	Better	Better	Same	Same or worse	Same	↑ or =	=	Same or Worse
- Rules of Engagement	Better	Better	Better	Same or Better	Same or Worse	↑ or =	=	Same or Worse
Expand Federal Law								
- Included in "Patient Bill of rights"	Better	Better	NE	Same or Worse	U	↑	U	Worse
- Independent Emergency Services bill	Better	Better	NE	Same or Worse	Same or Better	NE	NE	Worse
Federal Laws Plus								
- Change Burden of Proof in Claims Process	Better	Better	U	Worse	Better	↑ or =	=	Worse
Expand Liability	Better	Better	NE	Worse	U	↑	↑	Worse
Exhaustion						↓		
Limit Punitive $						↓	↓	
Employer Protection							↓	
MD Protection							↓	

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